Dictionary (a copy of the definition is attached) is a fundamental form of a solid characterized by high tenacity and an extremely high length to diameter ratio. Fibers can comprise natural fibers as well as synthetic fibers. A fiber consisting essentially of a polyhydroxyalkanoate resin would thus be a solid having a high tenacity and an extremely high length to diameter ratio that consists essentially of polyhydroxyalkanoate resin. The Applicants fail to see how this is nonsensical. With respect to the "continuous matrix, the filler, or the cellular material, the Applicants note that these materials can also consist essentially of a polyhydroxylalkanoate resin.

Reviewing claim 1, one can see that it is not indefinite. Specifically, claim 1 is directed to a vehicle component that comprises a biodegradable material. This means that the vehicle component includes a biodegradable material but can also include other materials. The biodegradable material includes at least one of a fiber, a continuous matrix, a filler, or a cellular material. This means that the biodegradable material can potentially include one of these components (i.e., a fiber, a continuous matrix, a filler, or a cellular material). The component that is included can "consist essentially of" a polyhydroxyalkanoate resin. "Consisting essentially of" is a term of art and means that the component (i.e., a fiber, a continuous matrix, a filler, or a cellular material) includes a polyhydroxyalkanoate (PHA) resin and those material that do not affect the basic and novel characteristics of the PHA resin. Thus claim 1 is not indefinite and the Applicant respectfully request that the Examiner withdrawal this rejection.

With respect to the 35 U.S.C. §102(e) rejection of claims 1-11 and 13, the Applicants respectively argue that a fiber comprising a blend PHA and a cellulose ester where the PHA comprises 30% to about 75% PHA does not consist essentially of PHA. As discussed above, the phrase "consists essentially of" is a term of art that limits the scope of a claim to materials described (i.e., PHA) and those that do not materially affect the basic and novel characteristics of the invention. Clearly, the

addition of 25% -75% cellulose ester to a component, such as a fiber, a continuous matrix, a filler, or a cellular material, would affect the properties of the component. This is discussed in Buchanan et al. at col. 16, lines 18-22 (noted by the Examiner in the Office Action) which states that the modulus of blend is affected by the percentage of cellulose ester relative to PHA. The elastic modulus is a basic characteristic of the invention and is specifically discussed on page 17 of the patent application. Accordingly, Buchanan et al. do not teach fibers or continuous phases of composites that consist essentially of the polyhydroxyalkanoate resin. Thus, Buchanan et. al. do not teach all of the limitations Claim 1. Therefore, withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2-11 and 13 depend either directly or indirectly from claim 1. Claims 2-13 should therefore be allowable for the aforementioned deficiencies of the rejection with respect to claim 1 and for the specific limitations recited in claims 2-13.

Claim 12 was rejected under 35 U.S.C. §103 as being unpatentable in view of Buchanan et al. and Noda et al. The Office Action suggests that Buchanan et al. do not specify the PHA as PHBV, while Nodal et al. shows this feature in Column 4, line 39. The Office Action argues that one of ordinary skill in the art would include this polymer from Noda et al. to produce certain desired characteristics in the finished product.

Claim 12 is allowable over Buchanan et al. in view of Noda et al. because Buchanan et al. teach that the polyhydroxyalkanoate is blended with a cellulose ester and that this blend can be used as a fiber or in a composite. In contrast, the fiber, the continuous matrix, the filler, or the cellular material recited in claim 12 consists essentially of a polyhydroxyalkanoate. Assuming arguendo, that Noda teaches that additional polyhydroxyalkanoates can be used in Buchanan et al., Buchanan et al. would still teach that these polyhydroxyalkanoate be blended with a cellulose ester, which would not meet claim 12. Thus, claim 12 is allowable over Buchanan et al. in view of Noda et al. Therefore, allowance of claim 12 is respectfully requested.

Claims 14-16 were rejected under 35 U.S.C. §103 as being obvious over Buchanan et al. in view of Willett et al. The Office Action suggests that Buchanan et al. do not teach a biodegradable material that includes a filler, but Willett et al. teach that it would be obvious to include a filler material.

Claims 14-16 are patentable over Buchanan et al. in view of Willett et al. because Buchanan et al. in view of Willett et al. do not teach a biodegradable material that comprises at least one of a fiber, a continuous matrix, a filler, or a cellular material that consists essentially of a polyhydroxyalkanoate resin. Buchanan et al., as discussed above, teach a blend of a polyhydroxyalkanoate and a cellulose ester material. Willett et al. do not teach or suggest polyhydroxyalkanoate materials. Thus, Buchanan et al. and Willett et al. do not teach or suggest a biodegradable material that comprises at least one of a fiber, a continuous matrix, a filler, or a cellular material that consists essentially of a polyhydroxyalkanoate resin. Therefore, withdrawal of the rejection of claims 14-16 is respectfully requested.

Claims 17, 19, 32, and 43 were rejected under 35 U.S.C. §103 as being obvious over Warnez et al. in view of Buchanan et al. The Office Action suggests that Warnez et al. disclose a canister and air bag, but does not state that either element is biodegradable. Buchanan et al. discloses automotive components comprising polyhydroxyalkanoate.

As discussed above, claim 17 was amended to include the limitation that at least one of the vehicle occupant protection device or the reaction canister includes at least one of a fiber, a continuous matrix, a filler, or a cellular material. The fiber, the continuous matrix, the filler, or the cellular material consists essentially of a polyhydroxyalkanoate resin.

Claim 17 is patentable over Buchanan et al. in view of Warnez et al. because Buchanan et al. in view of Warnez et al. do not teach a reaction canister or a vehicle occupant protection device that comprises at least one of a fiber, a continuous matrix, a filler, or a cellular material that consists essentially of a polyhydroxyalkanoate resin.

As discussed above with respect to claim 1, Buchanan et al. teach a blend of cellulose esters and a polyhydroxyalkanoate resin can be used as automotive trim. Buchanan et al. do not teach or suggest a reaction canister or a vehicle occupant protection device can comprise a fiber, a continuous matrix, a filler, or a cellular material that consists essentially of a polyhydroxyalkanoate resin. Warnez et al., also, do not teach or suggest a reaction canister or a vehicle occupant protection device can comprise a fiber, a continuous matrix, a filler, or a cellular material that consists essentially of a polyhydroxyalkanoate resin. Thus, claim 17 is allowable for the same reasons as claim 1 and for the specific limitations recited in claim 17. Therefore, withdrawal of the rejection of claim 17 is respectfully requested.

Claim 19 depends from claim 17 and, therefore, should be allowable for the same reasons as claim 17 and for the specific limitations recited in claim 19.

Claims 32 and 42 contain similar limitations as claim 17 and, therefore, should be allowable for the same reasons as claim 17 and for the specific limitations recited in claims 32 and 42.

Claims 18, 20-30, 33-41, and 43-45 were rejected under 35 U.S.C. §103 as being unpatentable over Warnez et al. in view of Buchanan et al., and in further view of Noda and Hansen. The Office Action suggests that the combination of these references disclose the recited elements, for the rationales previously discussed in the Office Action.

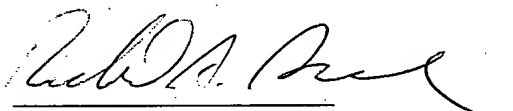
Claims 18, 20-30, 33-41, and 43-45 depend either directly or indirectly from claims 17, 32 and 42. Claims 18, 20-30, 33-41, and 43-45 are patentable over Warnez et al. in view of Buchanan et al., and in further view of Noda et al. and Hansen because of the aforementioned deficiencies of the rejection discussed with respect to claims 17, 32, and 42. Thus, claims 18, 20-30, 33-41, and 43-45 are allowable for the same reasons as claim 17, 32, and 42 and for the specific limitations recited in claims 18, 20-30, 33-41, and 43-45.

Claims 31 and 46 were rejected under 35 U.S.C. §103 as being obvious over Warnez et al. in view of Buchanan et al., Noda, and Hansen, and further in view of Sinclair et al. The Office Action suggests that the previous patents do not disclose a Mullen burst specification, while Sinclair et al. suggest certain ranges of the Mullen strength and elastic modulus produce certain characteristics and that it would be obvious to one of ordinary skill in the art to include these characteristics.

Claims 31 and 46 depend respectively from claims 17 and 42. Claims 31 and 46 are patentable over Warnez et al. in view of Buchanan et al., Noda, and Hansen, and further in view of Sinclair et al. because of the aforementioned deficiencies of the rejection discussed with respect to claims 17 and 42. Thus, claims 31 and 46 are allowable for the same reasons as claim 17 and 42 and for the specific limitations recited in claims 31 and 46.

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance, and allowance of the above-identified application is respectfully requested.

Respectfully submitted,



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Hawley's

Condensed Chemical

Dictionary

TWELFTH EDITION

Revised by

Richard J. Lewis, Sr.

VNR VAN NOSTRAND REINHOLD COMPANY
New York

Use: In blasting agents as well as fertilizers because its coating of kieselguhr and its prilled form, making it safer to handle than the usual grades.

fiber. A fundamental form of solid (usually crystalline) characterized by relatively high tenacity and an extremely high ratio of length to diameter (several hundred to one). Natural fibers are animal, e.g., wool and silk (proteins), vegetable, e.g., cotton (cellulose), and mineral (asbestos). Cotton fiber is called staple and rarely exceeds 2 inches in length.

Semisynthetic fibers include rayon and inorganic substances extruded in fibrous form, such as glass, boron, boron carbide, boron nitride, carbon, graphite, aluminum silicate, fused silica, and some metals (steel). Synthetic fibers are made from high polymers (polyamides, polyesters, acrylics, and polyolefins) by extruding from spinnerets (nylon, "Orlon," etc.). Some are being used in specialty papers, though the primary use is in textile fabrics.

For ceramic fibers see "Fiberfax."

Metal fibers are used in several ways: (1) As "whiskers," which are single-crystal fibers up to 2 inches long having extremely high tensile strength; they are made from tungsten, cobalt, tantalum, and other metals, and are used largely in composite structures for specialized functions. (2) As filaments, which are alloys drawn through diamond dies to diameters as small as 0.002 cm; steel for tire cord and antistatic devices has been developed for such applications. (3) In biconstituent structures composed of a metal and a polymeric material; for example, aluminum filament covered with cellulose acetate butyrate.

Hollow fibers of cellulose acetate and nylon are used as membranes in the reverse osmosis method of water purification.

See also filament, denier, whiskers, glass fiber, and following entries.

fiber, biconstituent. A composite fiber comprising a dispersion of fibrils of one synthetic material within, and parallel to, the axis of another, also a fiber made up of polymeric material and a metal or alloy filament.

fiberfill. A fiber designed specifically for use as a filling material in such products as pillows, comforters, quilted linings, and furniture battings, e.g., sisal, jute.

"Fiberfrax" [*Carborundum*]. TM for ceramic fiber made from alumina and silica. Available in bulk as blown, chopped and washed, long staple, paper, rope, roving, blocks.

Properties: Retains properties to 1260C and under some conditions used to 1648C, lightweight, inert to most acids and unaffected by hydrogen atmosphere, resilient.

Use: High-temperature insulation of kilns and furnaces, packing expansion joints, heating elements, burner blocks; rolls for roller hearth furnaces and piping, fine filtration, insulating electrical wire and motors, insulating jet motors, sound deadening.

fiber gear. A driver gear made of a material of somewhat lower strength than the driven gear (cast iron); for example, a composite such as fiberglass-reinforced plastic or an engineering plastic, e.g., nylon. It is intended to fail under overload, thus protecting the driven master gear from destructive stress.

"Fiberglas" [*Owens-Corning*]. TM for a variety of products made of or with glass fibers or glass flakes including insulating wools, mats and rovings, coarse fibers, acoustical products, yarns, electrical insulation, and reinforced plastics.

See also glass fiber, reinforced plastic.

fiber glass. See glass fiber.

fiber, graphite. See graphite fiber.

fiber, optical. A fine-drawn silica (glass) fiber or filament of exceptionally high purity and specific optical properties (refractive index) that transmits laser light impulses almost instantaneously with high fidelity. Such fibers are made from quartz coated with germanium-doped silica by vapor deposition; 100 or more filaments are assembled into a cable which has extremely high data-carrying capacity. These are applicable not only to telephonic communication systems, for which they are now being used, but also to remote-sensing devices which permit analysis of samples at widely separated locations. Thus, one of the most important developing uses of optical fibers is in analytical instrumentation. As they are nonelectrical and noncorrosive, optical fiber cables are safe to use in highly toxic or explosive environments, e.g., radioactive separations and hazardous-waste analyses. The laser beam is coupled to the end of the cable (which may be up to 1000 meters long) by a device called an optrode; the light traverses the cable and interacts with the sample, eliciting a signal that is reflected back through the same cable to a spectrometer. Fiber optics are also used in other forms of instrumentation, e.g., radiation dosimeters and high-temperature thermometers. In the latter case, the fibers are made from single crystals of alumina.

See also glass, optical; laser; thermometer (5).

fiber-reactive dye. See dye, fiber-reactive.